

ZAGER, B.A.; INDREASH, G.; TISHIN, V.G.; SHELAYEV, I.A.; SARANTSEVA,  
V.R., tekhn. red.

[Electron loading of a cyclotron resonator] Elektronnaia zagruzka  
rezonatora tsiklotrona. Dubna, Ob"edinennyi in-t iadernykh issle-  
dovaniy, 1962. 10 p. (MIRA 15:6)

(Electric resonators)

(Cyclotron)

ACCESSION NR: AP4013417

S/0057/64/034/002/0297/0306

AUTHOR: Zager, B.A.; Tishin, V.G.

TITLE: High frequency resonant discharge and possibilities of suppressing it

SOURCE: Zhurnal tekhn.fiz., v.34, no.2, 1964, 297-306

TOPIC TAGS: discharge, resonant discharge, multipactor effect, resonant discharge suppression, multipactor effect suppression, single-electrode resonant discharge, two-electrode resonant discharge

ABSTRACT: The high frequency resonant discharge that occurs in high vacuum apparatus as a result of electron multiplication by secondary emission at the electrodes (multipactor effect) was investigated both theoretically and experimentally. Particular attention was given to the effect of an applied constant field (bias), which can suppress the discharge by asymmetrically altering the flight times in the two directions. A simple calculation in which the initial velocities of the secondary electrons are neglected and the field is assumed to be uniform indicates that two-electrode resonant discharge should be suppressed by a bias exceeding  $0.05 (4\pi^2 m/e) (fd)^2$ , where  $f$  is the frequency,  $d$  is the electrode separation, and  $m$  and

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ACCESSION NR: AP4013417

$e$  are the electron mass and charge, and that single-electrode resonant discharge should be suppressed by a bias somewhat greater than twice this value. Resonant discharge between 20 cm diameter circular plates was investigated experimentally over the frequency range from 9 to 23 Mc. The high frequency potential was supplied by a self-excited oscillator and was measured with an electrostatic voltmeter. The presence of a discharge was indicated by fluorescence of material included for this purpose, or by the direct current to the plates due to loss of electrons to the wall of the chamber. At  $fd$  values greater than about 250 megacycle cm the experimental results agreed roughly with the theory. A bias of  $0.16(4\pi^2 m/e)(fd)^2$  would suppress both two-electrode and single-electrode discharge at all amplitudes. Deviations from the theory at lower  $fd$  values are presumed to be due to the effects of electron velocity distribution, which were neglected in the theory. Small values of the bias were observed to increase the resonant discharge intensity. This phenomenon may be useful in connection with instruments (e.g. frequency multipliers) in which the presence of resonant discharge is required. Resonant discharge did not occur at  $fd$  values less than 90 megacycle cm. This agrees better with the value of 50 eV given by A.I.Hatch and H.B.Williams (Phys.Rev.112,No.3,1958) for the electron energy at which the secondary emission coefficient becomes unity than

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ACCESSION NR: AP4013417

with the value of 200 eV given by L.B.Mullet, R.E.Clay and R.I.B.Hadden (AERE.GP/R, 1076,1957). The material of the plates (Cu, Fe, Al, Ti) had no marked effect on the results. Air, chlorine, and sulfur were found to poison the discharge, presumably by forming a surface layer of negative ions on the electrodes. It is concluded that high frequency resonant discharge can be suppressed by applying sufficient bias or by keeping the fd value below 90 megacycle cm, and that the discharge does not occur when the electrodes are covered by a surface layer of negative ions. Orig.art.has: 23 formulas and 7 figures.

ASSOCIATION: none

SUBMITTED: 13Aug62

DATE ACQL 26Feb64

ENCL: 00

SUB CODE: PH,GE

NR REF SOV: 002

OTHER: 010

Card 3/3

ZAGER, B.A.; TISHIN, V.G.

High-frequency resonance discharge in a cyclotron. Zhur.  
tekh. fiz. 33 no.9:1121-1130 S '63. (MIRA 16:11)

L 11400-63

EWI(m)/BDS AFFTC/ASD

S/120/63/000/002/002/041

54  
53

AUTHOR: Zager, B.A., Indreash, G., Tishin, V.G., and Shelayev, I.A.,

TITLE: Electronic loading of cyclotron resonators 17

PERIODICAL: Pribery i tekhnika eksperimenta, March-April 1963, v. 8,  
no. 2, 20-24.

TEXT: In order to improve the design and operation of cyclotrons, the authors discuss the 25-30 percent loss occurring in voltage on cyclotron D's when the magnetic field is switched on. This phenomenon is connected with avalanches of electrons oscillating between the rims of the D's. After 20-30 hours of aging, layers of carbon form on the rims of the D's and the voltage on the D's increases, but is still closely related to the strength of the magnetic field. The aging time may be decreased by coating the D rims with carbon before operating the cyclotron. Coating of other surfaces where electron avalanches may appear, results in a further 7 percent decrease in the power loss in accelerating secondary avalanche electrons. These results were obtained with the U-150 cyclotron.

ASSOCIATION: Gb'yedinenny inst. yadernykh issledovaniy (Joint Institute of Nuclear Research)  
Card 1/2

ACC NR: AR6033087

SOURCE CODE: UR/0271/66/000/008/B035/B035

AUTHOR: Zhukov, G. P. ; Barilko, Sh. I. ; Zabiyaikin, G. I. ; Kim Gen' Chu' ;  
Li Min Ven' ; Tishin, V. G. ; Shibayev, V. D.

TITLE: Magnetic tape analyzer

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 9B265

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelectron.  
T. 3, Ch. 1. M., Atomizdat, 1965, 197-207

TOPIC TAGS: magnetic analyzer, magnetic recording tape, computer memory, storage device

ABSTRACT: The block-diagram of a multidimensional magnetic analyzer with magnetic tape recording is investigated. Binary codes which characterize the investigated event are simultaneously recorded in the recorder on 20 tracks of an evenly moving magnetic tape. The recorder contains an intermediate memory computer, a recording and readout device, a controlling storage device with an oscillographic indicator and a device for selecting information during readout.

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UDC: 681.142:621.374.32

ACC NR: AR6033987

Information is delivered to the input of the intermediate memory in the form of a parallel binary code. The controlling storage device is designed to control the regularity of the analyzer's operation. It possesses a recording cycle of 12  $\mu$ sec over 512 recording channels. In order to realize a time-amplitude analysis with a large number of channels, the recorder has its own amplitude and time coding units. Three illustrations. Bibliography of 3 titles. [Translation of abstract]

SUB CODE: 09/

Card 2/2



TISHIN, V.S.

Study of sugar substances in the liver of cadavers following sudden  
death. Arkh. pat. 23 no. 1:65-70 '61. (MIRA 14:1)  
(LIVER) (CARBOHYDRATES) (DEATH (BIOLOGY))

ACC NR: AP6036954

(A, V)

SOURCE CODE: UR/0181/66/008/011/3181/3186

AUTHOR: Tishin, Ye. A.; Tsarev, B. M.

ORG: Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut)

TITLE: On the existence of a minimum in the work function of film cathodes

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3181-3186

TOPIC TAGS: work function, metal film, cathode

ABSTRACT: Studies of the dependence of the work function  $\phi$  on the degree of coverage  $\theta$  were carried out on barium and calcium films vaporized onto tungsten, tantalum, niobium and rhenium, and on cesium films vaporized onto tungsten and rhenium. For all systems, in the  $10^{-9}$ - $10^{-10}$  mm pressure range of the residual gases,  $\phi(\theta)$  functions with a minimum were obtained. It was found that impurities in amounts equivalent to tenths and hundredths of a monolayer do not have any appreciable effect on the form of  $\phi(\theta)$ ; this suggests that the minimum in the work function of the cathodes will exist even under conditions of limiting purity. No minimum in  $\phi(\theta)$  was observed in two cases: (1) when the films were vaporized onto powders and (2) when the sample (a tungsten ribbon) was heated briefly close to the melting point. It is concluded that a minimum in the work function is characteristic of monatomic films on smooth surfaces, and that the roughness of the surface leads to a monotonic  $\phi(\theta)$  relationship. In conclusion, the authors express their deep appreciation to V. I. Makukh for his

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ACC NR: AP6036954

consultation and assistance in problems of producing an ultrahigh vacuum, and to G. M. Kukavadze, who directly supervised the mass-spectrometric studies. Orig. art. has: 7 figures.

SUB CODE: 20<sup>09</sup>/ SUBM DATE: 23Feb66/ ORIG REF: 007

Card 2/2

TISHINA A.

"Polucheniye bitumov iz slantsevoy smoly," p. 35,  
Goryuchiye Slantsy, No. 1, 1932.

TISHINA, A., YEFREMOVA, L., OGUSHEV, K., AND FAYNGAR, M.

Pererabotka Veymarnskikh Slantsev V Plasticheskiy, Stroitel'Nyy I  
Krovel'No-Dorozhnyy Material, Goryuchiye Slantsy, 1933, No. 6, 43.

SO: Goryuchiye Slantsy #1934-35, TN .871  
G .74

TISHINA, A., YEFREMOVA, L., URUSOV, L., AND FAYNGER, E.

Polucheniye Bitumov Iz Slantsevoy Smoly, Goryuchiye Slantsy, 1932. No. 1, 35.

SO: Goryuchiye Slantsy # 1934-35, TN .871  
G .74

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

2C

P-III-4

OPEN

COMMON ELEMENTS

COMMON VARIANTS INDEX

ASB-32A METALLURGICAL LITERATURE CLASSIFICATION

PROTEINS IN WHEAT AND THE BREAD-BAKING QUALITIES.  
N. PROMKURJAKOV and A. TISHINA (Sci. Inst. Cereal  
Res., Moscow, 1934, 13, 30-34).—Flours of low baking  
quality had < 95% of the total N in protein form. In  
good flours the H<sub>2</sub>O-sol. N was 11% of the total.  
No differences in proteolytic enzyme activity were  
observed. Ch. Abs. (p)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

OPEN

COMMON ELEMENTS

COMMON VARIANTS INDEX

ASB-32A METALLURGICAL LITERATURE CLASSIFICATION

12

Proteins in wheat and bread-baking qualities. N. Proskuryakov and A. Tishina. *Sci. Inst. Cereal Research (Moscow)* 13, 21-34(1934).—Various wheat flour samples of different bread-baking qualities were investigated. Flours poor in bread-baking qualities invariably contained less than 95% of the total N in the form of protein N. The water-sol. N of good flour samples amounted to 11% of the total N. There is no marked difference in the proteolytic enzyme activity of good and poor varieties of flour.

H. Cohen



EXCERPTA MEDICA Sec. 7 Vol. 9/10 Oct. 55

*TISHINA E.N.*

2145. TISHINA E.N. \*The influence of a high protein intake on the function of the liver in epidemic hepatitis in children (Russian text) PEDIATRIJA 1953, 5 (43-48)

As indicators of the function of the protein metabolism of the liver, bilirubin, total proteins, NPN and urea were determined in the blood, ammonia and amino acids in 24 hr. urine. Treatment consisted of bed rest, daily administration of 200-500 ml. of a 3% solution of magnesium sulphate, 200-300 ml. of a 10% dextrose, 200-300 mg. of ascorbic acid and 3-4 tablets of multivit. The patients 7-12 yr. old received 3 various diets: In group I were 4 children who received a lacto-vegetable diet with 71 g. proteins, 350 g. carbohydrates; the fats were in the first period of observation reduced to 25-30 g. and later increased to 82 g. The daily calories were 2390 and the proteins 2.79 g./kg. This diet was soon abandoned because of its bad results. The 5 children of group II received 70 g. of proteins, 66 g. of fats, 350 g. of carbohydrates. The calories were 2350 and the proteins 3.08 g./kg. In the third group the 22 children were on the same diet with 100 g. of milk-curds daily in addition; the proteins were thus increased to 3.61 g./kg. Some of the children in all 3 groups received plasma parenterally once or repeatedly. The most favourable results in all respects were in the 3rd group. Plasma infusions were favourable only if the dose did not exceed 2 ml./kg. and if the interval between the infusions was not shorter than 8-14 days.

Najman - Rijeka

TISHINA, I.I., RYCHKOV A.I. [deceased]

Heat transfer during the surface boiling of solutions of nonvolatile substances. Khim. prom. 41 no.3:219-221 Mr '65. (MIRA 18:7)

F-5

TISHINA, N.D.  
USSR/ Microbiology. Microorganisms Pathogenic  
to Humans and Animals

Abs Jour: Ref Zhur - Biol., No 6, 1958, 24238

Author : Tishina, N.D.  
Inst : Not given

Title : On the Problem of Resistance of Paratyphoid Stimu-  
lant in Sheep to Certain Physical and Chemical Factors.

Orig Pub: Tr. Stavropolsk. s.-kh. in-ta, 1956, No 7, 343-348

Abstract: A culture of Salmonella ovis on Chotinger agar  
at room temperature dies after only 5 months.  
Batiste cloth test objects saturated with para-  
typhoid cultures buried in sterile soil or dung  
litter to a depth of 13 cm produced growth in  
summer beyond 90 days. The culture is killed  
instantly on boiling, but it will withstand  
heating at 70° for 15 minutes. The culture dies

Card

Card 1/2

KOKURIN, A.D.; ROZENTAL, D.A.; SUSLINA, V.P.; TISHINA, N.


Investigating the interaction of carbon dioxide with fuel carbon  
under dynamic conditions. Trudy LTI no.59:107-112 '61.  
(MIRA 17:9)

SOV/80-59-1-32/44

AUTHORS: Andrianov, K.A., Golubtsov, S.A., Tishina, N.E. and Trofimova, I.V.

TITLE: Direct Synthesis of Phenyltrichlorosilane in a "Fluidized" Bed  
(Pryamoy sintez feniltrikhlorsilana v "kipyashchem" sloye)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 201-207 (USSR)

ABSTRACT: The authors investigated the synthesis of phenyltrichlorosilane out of chlorobenzene, hydrogen chloride and silicon in a "fluidized" bed in the presence of copper and iron as catalyzers at a temperature of approximately 600°C. The experiments performed showed the possibility of attaining the high efficiency of the process, the satisfactory yield of phenyltrichlorosilane, approximately 11 g from 100 g of the contact mass per hour, and sufficiently complete utilization of silicon,  60%. There are 7 tables and 5 references, 1 of which is Soviet and 4 American.

SUBMITTED: May 29, 1957

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L 16656-65 EWT(m)/EPF(c)/EWP(j)/T Pc-L/Pr-L RM

ACCESSION NR: AP4041804

S/0080/64/037/007/1634/1636

AUTHOR: Golubtsov, S. A., Tsvanger, T. A.; Andrianov, K. A.; Tishina, N. N.  
Vasil'chikov, N. V.

TITLE: Effect of conditions on the synthesis of phenyltrichlorosilane from silicon,  
chlorobenzene and hydrogen chloride in a fluidized bed

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 7, 1964, 1634-1636

TOPIC TAGS: phenyltrichlorosilane, synthesis, fluidized bed reaction, reaction  
condition, reactant ratio, reaction temperature, reaction pressure, reactant  
feed rate

ABSTRACT: This is a continuation of work reported by K. A. Andrianov,  
S. A. Golubtsov, N. N. Tishina and I. V. Trofimaova (ZhPKh, XXXII, 201 (1959))  
to determine optimum conditions for the fluidized bed synthesis of phenyltrichloro-  
silane by reaction of silicon (as a 20% Si-Cu alloy), chlorobenzene and hydrogen  
chloride. Results are summarized. It was found that optimum conditions include:  
(a) reactant ratio of HCl:  $C_6H_5Cl$  = 1.5; (b) gas flow rate = 2.5 cm/sec; (c) con-

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L 16654-65

ACCESSION NR: AP4048460

chemical properties are studied for the first time. These studies showed that some of these esters have good properties as plasticizers and can be used with polyvinyl chloride, polyamide and nitrocellulose resins. Research is being continued with reference to improving the ester yield, testing them as plasticizers and synthesizing esters based on cyclohexylcarbinol. Orig. art. has: 1 structural formula and 2 tables.

ASSOCIATION: Institut neftekhimicheskikh protsessov (Institute of Petrochemical Processes)

SUBMITTED: 19Feb.64

ENCL: 00

SUB CODE: OC

NO REF SOV: 009

OTHER: 000

Card

2/2

TISHINA, N. N.

N. N. Tishina, K. A. Andrianov, S. A. Golubtsov, M. I. Kafyrov and R. L. Darashkevich, "The Reaction of Phenylizing the Trichlorsilane."

report presented at the Second All-Union Conference on the Chemistry and Practical Application of Silicon-Organic Compounds held in Leningrad from 25-27 September 1959.

Zhur. Prikl. khimii, 1959, No. 1, pp. 238-240.



5.3700(B)

5(3)  
AUTHORS:

Golubtsov, S. A.,  
Andrianov, K. A.,  
Tishina, N. N.

Reaction of Joint Phenylation of Trichlorosilane and Silicon  
Tetrachloride

Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp 91-93  
(USSR)

TITLE:

PERIODICAL:

ABSTRACT:

The authors intended to eliminate the side reactions which lower the yield to 40% theoretical phenyltrichlorosilane (Ref 5), and at the same time tried to phenylate the silicon tetrachloride formed in the reaction. They found that the hydrogenation of silicon tetrachloride with hydrogen proceeds satisfactorily, if the reagents are heated under the same conditions as bring about the phenylation of trichlorosilane (440-460°, 180 atm). The results obtained proved that it is fundamentally possible to phenylate  $\text{SiCl}_4$ , if it is first hydrogenated to trichlorosilane, and only then reacted with benzene. The hitherto unused hydrogen formed as a by-product.

S/020/60/131/01/025/060  
68812  
B011/B006  
AS USSR,

Reaction of Joint Phenylation of Trichlorosilane  
and Silicon Tetrachloride

68812  
S/020/60/131/01/025/000  
B011/B006

in reaction (1) was utilized for the first stage of this process. For this purpose, the authors reacted a mixture of  $\text{SiCl}_4$ ,  $\text{C}_6\text{H}_6$ , and trichlorosilane (Ref 6) under the above-mentioned reaction conditions. The molar ratio of trichlorosilane :  $\text{SiCl}_4$  was varied between 0.25 : 0.75 and 0.85 : 0.15.

It can be seen from figure 1 that the yield in phenyltrichlorosilane (in g-mol per 100 g-mol of reacted trichlorosilane) increases with increasing content of  $\text{SiCl}_4$  in the reaction mixture. This cannot be explained by the suppression of the disproportionation of trichlorosilane, occurring as a side reaction, since the yield in phenyltrichlorosilane often considerably exceeds 100 g-mol per 100 g-mol trichlorosilane. This proves that the phenylation proceeds according to the intended scheme (see scheme given), under utilization of the hydrogen formed in reaction (1). The increased hydrogen pressure facilitates the first reaction, i.e. hydrogenation. For this reason phenyltrichlorosilane, final product, was obtained in much higher yield than side product at at-

Card 2/3

Reaction of Joint Phenylation of Trichlorosilane  
and Silicon Tetrachloride

68812

S/020/60/131/01/025/060  
B011/B006

mospheric pressure. The authors have thus proved that the phenylation of  $\text{SiCl}_4$  with benzene gives sufficiently high yields even without use of metalorganic compounds, if conditions are so chosen, that  $\text{SiCl}_4$  is hydrogenated by hydrogen to the intermediate trichlorosilane according to reaction (2). Trichlorosilane then reacts with benzene and forms phenyl-trichlorosilane, regenerating hydrogen. There are 1 figure and 6 references, 5 of which are Soviet. ✓

SUBMITTED: November 5, 1959

Card 3/3

L 14491-65 EWT(m) DIAAP/SSD/AFWL/ASD(a)-5/ESD(3s)/ESD(t)

ACCESSION NR: AP4048634

S/0048/64/028/010/1631/1636

AUTHOR: Dzhelepov, B.S.; Tishkin, P.A.; Shishelov, I.A.

B

TITLE: Decay of the 169-day metastable state of Re<sup>184</sup> <sup>19</sup>Report, Fourteenth Annual  
Conference on Nuclear Spectroscopy held in Tbilisi, 14-22 Feb 1964<sup>7</sup>

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.10, 1964, 1631-1636

TOPIC TAGS: metastable state, electron conversion, electron spectrum, beta decay,  
nuclear spectroscopy, rhenium

ABSTRACT: The conversion electron spectrum of a cyclotron irradiated tungsten target was examined during a period of 18 months in order to obtain information concerning the decay of the 169-day metastable state of Re<sup>184</sup>. A double toroidal  $\beta$ -spectrometer with a resolution of 1.5% was employed, and coincidences were counted with a "fast-slow" circuit having a resolving time of 10 nanosec. Nine conversion peaks were observed in the energy range from 25 to 125 keV, of which four fell off in intensity with a period close to 169 days. Many of the observed peaks were revealed by their decay and their coincidence behavior to be complex. A number of transitions in Re<sup>184</sup>, W<sup>184</sup> and W<sup>183</sup> were identified (some tentatively) and informa-

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L 14491-65

ACCESSION NR: AP4048634

tion concerning their multipolarities was obtained from the intensity ratios. It was established that the decay of the metastable state of  $\text{Re}^{184}$  is complex, but the data are too scanty for construction of a decay scheme. Transitions of 55 and 163 keV energy in  $\text{Re}^{184}$  were observed in coincidence. The sum of these energies corresponds closely to the energy of the 217 keV  $\gamma$ -rays observed by N.R. Johnson (Bull. Amer. Phys. Soc. 6, 73, 1961; Phys. Rev. 129, 1737, 1963), who also detected 163 keV  $\gamma$ -rays. These transitions were of low multipolarity and accordingly connect states with close spin values. "In conclusion we express our gratitude to A.I. Feoktistov for providing the material for the source, and S.F. Koksharova for assistance in the measurements." Orig.art.has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: NP

NR REF SOV: 009

ENCL: 00

OTHER: 002

2/2

TISHINA, Ye. N. (Phys)

TISHINA, Ye. N. (Phys) -- "Effect of the Protein Load on the Functional Condition of the Liver in Epidemic Hepatitis in Children." Sub 22 Dec 52, Second Moscow State Medical Inst imeni I. V. Stalin. (Dissertation for the Degree of Candidate in Medical Sciences.)

SO: Vechernaya Moskva January-December 1952

TISHINA, Ye.N.; PROKUDINA, T.A.; VLASOV, V.A., professor, zaveduyushchiy; KALUGINA, M.B., glavnyy vrach.

Two cases of familial glycogenosis. *Pediatrics* no.4:71-75 J1-Ag '53.  
(MLBA 6:9)

1. Klinika propedevtiki detskikh bolezney pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta im. I.V.Stalina na baze Filatovskoy detskoy bol'nitsy (for Vlasov). 2. Filatovskaya detskaya bol'nitsa (for Kalugina).  
(Liver--Diseases)

USSR/Medicine - Epidemic Hepatitis      Sep/Oct 53

"The Effect of a Protein Load on the Functional Condition of Liver in Epidemic Hepatitis of Children,"  
E. N. Tishina, Propedeutic Clinic of Children's Diseases, 2nd Moscow Med Inst imeni I. V. Stalin.

Pediat, No 5, pp 43-48

Describes observations of three groups of children with epidemic hepatitis. Faster and uneventful recovery was observed in children who at the early stages of the disease had received a full diet (including meat) reinforced with cottage cheese. Transfusions of natural plasma produced controversial results.

270761



REYBAKH, M.S.; TSIRLIN, A.M.; MOZHAYKIN, A.S.; BORISOV. M.F.; TISHINA, N.N.

Studying the continuous process of cohydrolysis of organosilicon  
monomers used for the manufacture of electric insulation lacquers.  
Lakokras.mat. 1 ikh prim. no.2:64-67 '64. (MIRA 17:4)

TISHINA, Ye. N.

"Handbook on dietetics for young children." Reviewed by E.N. Tishina. *Pediatrics* no.2:84-85 Mar-Apr '55. (MLRA 3:8)  
(Children--Nutrition) (Diet)

KHODAREVA, R.B.; TISHINA, Ye.N., kandidat meditsinskikh nauk

Problem of the association of eosinophilic granuloma with xanthomatosis (Hand-Christian-Schueller syndrome). *Pediatrics* 39 no.2: 83-86 Mar-Apr '56. (MIRA 9:8)

1. Iz kafedry propedevtiki detskikh bolezney (zav.-prof. V.A. Vlasov) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina na baze Detskoy bol'nitsy imeni N.F.Filatova (glavnyy vrach M.N. Kalugina)

(LIPOIDOSIS, in infant and child,  
Hand-Christian-Schueller synd. (Rus))

TISHINA, Ye.N.; SOBOLEVA, N.I.; VAYTSENFEL'D, M.Ye.

Anomalies in the development of the kidneys in children. Vop. okh.  
mat. i det. 6 no.8:75-80 Ag '61. (MIRA 15:1)

1. Iz kafedra propedevtiki detskikh bolezney (zav. - prof. V.A.Vlasov)  
II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova i iz  
detskoy bol'nitsy imeni N.F.Filatova (zav. - patologoanatomicheskim  
otdeleniyem N.I. Soboleva, glavnyy vrach L.A.Vorokhobov).  
1 (KIDNEYS...ABNORMALITIES AND DEFORMITIES)

TISHINA, Ye.N.

Problem of the hepatolienal syndrome after Botkin's disease in  
children. *Pediatrics* 38 no.2:62-68 F '60. (MIRA 13:12)  
(HEPATITIS, INFECTIOUS) (SPLEEN—DISEASES)

TISHINA, Ye.N., dotsent; SEMENOV, B.N.

Eosinophile reactions of the blood in children. *Pediatrics* 37 no.11:  
60-63 N '59. (MIRA 13:3)

1. Iz kafedry propedevtiki detskikh bolezney II Moskovskogo meditsinskogo instituta (zaveduyushchiy - prof. V.A. Vlasov) na baze detskoy bol'nitsy imeni N.F. Filatova (glavnyy vrach M.N. Kalugina).  
(EOSINOPHILES)

TISHINA, Ye.N.,

TISHINA, Ye.N., kand.med.nauk; YEVSIKOVA, Z.F.; MAKAROV, V.N.

Paroxysmal tachycardia in a two-and-a-half-year-old child, complicated by hemiplegia and infarct-type changes in the electrocardiogram [with summary in English]. *Pediatrics* 36 no.1:74-78 Ja '58. (MIRA 11:2)

1. Iz kliniki propedevtiki detskikh bolezney II Moskovskogo meditsinskogo instituta (zav. kafedroy - prof. V.A.Vlasov) na baze Detskoy bol'nitsy imeni N.F.Filatova (glavnyy vrach M.N.Kalugina)  
(ARRHYTHMIA) (PARALYSIS) (CHILDREN--DISEASES)

TISHINA, Ye.

"Pamphlet on the schoolchild's health for parents" by A.D.Ostrovskii.  
Reviewed by E.Tishina. *Pediatrics* 36 no.1:94-95 Ja '58.  
(CHILDREN--CARE AND HYGIENE) (MIRA 11:2)  
(OSTROVSKII, A.D.)



TISHINSKIY, Yu.V.

Slide rule for determining the weight and length of tubes  
and solid blanks. Metallurg 7 no.2:35 F '62. (MIRA 15:3)

1. Pervoural'skiy Novotrubnyy zavod.  
(Slide rule)

TISHKEVICH, I.I.; SKOROPANOV, S.G., redaktor; ALEKSANDROVICH, Kh.,  
tekhnicheskiy redaktor

[Fodder root crops on peat bog soils] Kormovye korneplody na  
torfiano-bolotnykh pochvakh. Minsk, Izd-vo Akad.nauk BSSR,  
1955. 50 p. (MLA 10:10)

1. Chlen-korrespondent Akademii nauk BSSR (for Skoropanov)  
(Root crops)

TISHKEVICH, I. I.

27244. TISHKEVICH, I. I.-- Vozdelyvanie vazhneyshikh ovoshchnykh kul'tur na torfyanykh pochvakh i perspektiva razvitiya ovoshchevodstva v svyazi s melioratsiey poles'ya v sb: K voprosu osvoeniya i razvitiya proizvodit. Sil poles'ya. Minsk, 1949, s. 152-60.

S0: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

TISHKEVICH, I. I.

"Basic Agrotechnical Problems of Vegetable Crops on the Peat-Bog Soils of the Belorussian SSR." Cand Agr Sci, Inst of Socialized Agriculture. Acad Sci, Belorussian SSR, Minsk, 1954. (RZhBiol, No 7, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

NEKRASHEVICH, I.G.; LOYKO, V.I.; TISHKEVICH, M.I.

Use of semiconductor valve elements to measure the intensity of  
X-ray radiation. Sbor. nauch. trud. Fiz.-tekh.inst. AN BSSR. ✓  
no.7:107-113 '61. (MIRA 15:7)

(Semiconductors) (X rays)

SUKHORUK, A.M., inzh.; TISHKEVICH, N.Ya.; IVANOVSKIY, N.F., inzh.; MELEKHOV, F.P., inzh.; ABDURAKHMANOV, K.A.; IVANOV, I.I., red.

[Hydrological yearbook; 1955] Gidrologicheskii ezhegodnik, 1955 g. Tom 00, vyp. 0-0. Pod red. I.I.Ivanova. Leningrad, Gidrometeor. izd-vo, 1958. 58 p. (MIRA 12:5)

1. Russia (1923- U.S.S.R.). Glavnoye upravleniye gidrometeorologicheskoy sluzhby. 2. Zhukovskaya gidrologicheskaya stantsiya (for Sukhoruk, Tishkevich). 3. Krasnosel'skaya gidrologicheskaya stantsiya (for Ivanovskiy). 4. Podgornaya gidrologicheskaya stantsiya (for Melekhov, Abdurakhmanov).

(Hydrometeorology)

TISHKEVICH, V. inzh.

Using the method of plastic deformations in lapping holes. Avt.transp.  
37 no.1:46-47 Ja '59. (MIRA 12:2)  
(Machine-shop practice)

TISHKEVICH, V.

~~Expanding the axle shaft housing of the GAZ-51 automobile. Avt.~~  
transp. 34 no.9:23 S '56. (MIRA 9:11)  
(Axles)



AUNIN'SH, E.A. [Aunins, E.]; TISHKHEYZERS, E.R. [Tisheizers, E.]

Selection of a method for colorimetric determination of silicon  
in distilled and colored waters from offings and mouths of rivers.  
Trudy GOIN no.68:159-171 '62. (MIRA 16:7)  
(Seawater--Composition) (Silicon)

S/081/62/000/010/032/085  
B168/B180

AUTHORS: Vol'fson, F. I., Kushnarev, I. P., Lukin, A. I.,  
Smorchkov, I. Ye., Sonyushkin, Ye. P., Tishkin, A. I.

TITLE: Some problems concerning the formation of hydrothermal  
uranium deposits

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 117,  
abstract 10C111 (Izv. vyssh. uchebn. zavedeniy. Geol. i  
razvedka, no. 2, 1961, 12-24)

TEXT: A geological study of samples from hydrothermal uranium deposits  
from various provinces shows that they have many genetic features in  
common. The uranium-bearing provinces are characterized by many stages  
of magmatism. Uranium mineralization is due to plutonic pockets of  
granite magma in the final stage of development. Large-scale chemical  
analyses for one of the provinces showed the mean uranium content of the  
Early Hercynian magma complex to be  $2.2 \cdot 10^{-4}\%$ , that of the Middle  
Hercynian  $4.6 \cdot 10^{-4}\%$  and that of the Late Hercynian  $6.5 \cdot 10^{-4}\%$ . In each  
separate intrusive complex the quantity of uranium is greater in the

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Some problems concerning the ...

S/081/62/000/010/039/085  
B168/B180

younger rocks. Uranium mineralization occurs during one of the final stages of the hydrothermal process. The principal paragenetic associations of pitchblende are pitch-sulfide, pitch-carbonate, pitch-fluorite and pitch-quartz-pyrites. The first two associations are typical of uranium deposits properly speaking. Uranium can be transported in hydrothermal solutions in tetravalent and hexavalent forms, passing through the stages of true and colloidal solutions. The optimum conditions for the formation of the upper part of uranium deposits are found at 500-700 m from the former surface of the earth with a possible vertical mineralization range of up to 1800 m. Deposition of the ores is accompanied by silicification, chloritization, albitization and sericitization of the enclosing rocks. Albitization is typical of the upper parts of uranium ore-bodies. The temperature at which the ores form is found to be 150-200°C. [Abstracter's note: Complete translation.] ✓

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VOL'FSON, F.I.; KUSHNAREV, I.P.; LUKIN, L.I.; SMORCHKOV, I.Ye.;  
SONYUSHKIN, Ye.P.; TISHKIN, A.I.

Some problems of the formation of hydrothermal uranium deposits.  
Izv.vys.ucheb.zav.;geol.i razv. 4 no.9:12-24 S '61. (MIRA 14:9)

1. Institut tsvetnykh metallov i zolota imeni M.I. Kalinina i  
Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii  
i geokhimii AN SSSR.

(Uranium ores)

115 H K I N G H I L

21(4)	
International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958	807/2713
Doklady sovetskikh uchenykh; Yednomye goryzhebye i reaktoranye metalli. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: <u>Ita</u> : Trudy, vol. 3, 5,000 copies printed.	
Ed. (Title page): A.A. Kocherzhevskiy, Academician, A.P. Vinogradov, Academician, V.S. Kuznetsov, Corresponding Member, USSR Academy of Sciences, and A.I. Lur'e, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pavlovskiy and G.M. Pchelintsev; Tech. Ed.: E.I. Maslov.	
PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for graduate students and those who are interested in atomic science and technology.	
CONTENT: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the 2nd International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Lur'e, is devoted to geology, prospecting, concentration, and processing of nuclear source material. The second part, edited by G.I. Svirsky, includes reports on metallurgy, metallurgy, processing technology of nuclear fuels, reports on nuclear fuels, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See 807/2081 for the titles of the other volumes of the set.	
Ed. (Title page): A.A. Kocherzhevskiy, G.D. Glushko, Academician, V.A. Pechenkin, and M.S. Pchelintsev. Paragonomic Association of Hydrothermal Uranium Minerals. - In Uranium Deposits of the Soviet Union (Report No. 2201)	120
Gerasimov A.I., S.D. Batulin, G.A. Volkov, A.K. Litvin, and V.S. Serebrennikov. Some Characteristics of Uranium Distribution in Underground Waters (Report No. 2099)	124
New Data on Uranium Minerals in the USSR (Report No. 2066)	150
Gerasimov A.I., E.V. Kravchenko, A.I. Litvin, M.M. Sokolov, M.M. Sokolov, S.A. Smirnov, and S.P. Tikhonov. Some Theoretical and Methodical Problems of Radiometric Prospecting and Survey (Report No. 2095)	199
Belashovich Yu.P. The Gamma-ray Examination Method for Classifying Anomalies in Radioactivity (Report No. 2205)	213
Kozlov G.I., and M.I. Shchegolev. Some Problems of Radiometric Uranium Ore Concentration (Report No. 2081)	227
Card 4/11	

ANICHKOV, N.N., akademik; ZAKHAR'YEVSKAYA, M.A., prof.; TISHKIN, N.A.,  
doktor med.nauk; SARKISOV, D.S., doktor med.nauk; PETRUKHIN, V.G.,  
kand. med.nauk; PINCHUK, V.M., kand.med.nauk

Solomon Samuilovich Vail'; obituary. Arkh.pat. 21 no. 1:94-95 '59.  
(MIRA 12:1)

(OBITUARIES,  
Vail', Solomon, S. (Rus))

Tishkin, P. A. 181 "An Investigation of the Gamma Radiation of  $Br^{82}$ ,  $Cs^{134}$ ,  $Cr^{51}$ ,  $I^{131}$  and  $Hf^{175}$ , and 181 With the Aid of a Lens Spectrometer." Cand Phys-Math Sci, Leningrad State U, Leningrad 1953. (Referativnyi Zhurnal--Fizika, Jan 54)

SO: BUM 168, 22 July 1954

USSR/ Nuclear Physics

Card 1/1 Pub. 43 - 4/11

Authors : Dzhelepov, B. S.; Novosil'tseva, N. D.; and Tishkin, P. A.

Title : Formation of  $\text{Re}^{188}$  during the bombardment of W with slow neutrons

Periodical : Izv. AN SSSR. ser. fiz. 18/1, 76-78, Jan-Feb 1954

Abstract : Experiments prove that the entrainment of neutrons by Re, which is found among the substances usually attached to W, results in the formation of  $\text{Re}^{188}$  with a spectrum limit of 2 mev and a very small life period of 16.9 hr. One of the stable tungsten isotopes ( $\text{W}^{188}$ ) is considered to be the basic source for the formation of  $\text{Re}^{188}$ . The beta-spectrum of the  $\text{W}^{185}$  plus  $\text{W}^{188}$  plus  $\text{Re}^{188}$  compound derived after repeated extraction of Re from W was measured and the results obtained are given in graphs. The decomposition period for  $\text{Re}^{188}$  was established. Three references: 2-USSR and 1-USA (1946-1951). Graphs.

Institution : The A. A. Zhdanov State University, Physics Institute, Leningrad

Submitted : January 5, 1954



**"APPROVED FOR RELEASE: 07/16/2001**

**CIA-RDP86-00513R001755820004-9**

**APPROVED FOR RELEASE: 07/16/2001**

**CIA-RDP86-00513R001755820004-9"**

TISHKIN P.A.

48-7-7/21

AUTHORS: Dzhelepov, B.S., Preobrazhenskiy, B.K., Rogachev, I.M.,  
Tishkin, P.A.

TITLE: The Spectrum of the Conversion Electrons of No<sup>160</sup>  
(Spektr konversionnykh elektronov No<sup>160</sup>)

PERIODICAL: Izvestiya Akad. Nauk SSSR, Ser. Fiz., 1957, Vol. 21, Nr 7,  
pp. 962 - 965 (USSR)

ABSTRACT: The spectra of the conversion electrons of the erbium and holmium fractions were investigated by means of two lens spectro-meters. These fractions had been won from tantalum which was irradiated with the energy of 660 MeV.

1.) The spectrum of the conversion electrons of a one day isotope was investigated in several series as long as the source did not decay. After 24 hours, after the elimination of the source, the spectrum manifested itself as shown in figure 1. The half-decay period for the lines which are given in table 1 lie in the domain of 25 to 30 hours which justifies the assumption that all lines of table 1 belong to one isotope. The comparison with published data shows that the observed activity is probably con-

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The Spectrum of the Conversion Electrons of  $\text{Ho}^{160}$

48-7-7/21

nected with  $\text{Er}^{160}$ . It was shown in earlier works that  $\text{Ho}^{160}$  in the ground and isomeric states is obtained from the decay of  $\text{Er}^{160}$ .

2.) The holmium fraction was investigated by means of a two-lense spectrometer. Two preparations were investigated: The first one contained besides  $\text{Ho}^{160}$  an admixture of  $\text{Er}^{160}$ , therefore the decay curves have a complicated form. The second source was again cleaned; first the erbium fraction was eliminated and after 25 hours the pure holmium  $\text{Ho}^{160}$ ; the intensity of all lines agreed with the period  $5,3 \pm 0,2$  hours. Moreover 4 series of measurements in energy intervals of 2 - 200 keV were carried out. The total view of the obtained electron spectrum is represented on figure 2. Table 2 records the line energies and their identification. There are 2 tables, 2 figures and 5 references, 3 of which are Slavic.

ASSOCIATION: Leningrad State University imeni A.A.Zhdanov  
(Leningradskiy gos. universitet imeni A.A.Zhdanova)

AVAILABLE: Library of Congress

Card 2/2

115 HAIN 7/11

AUTHORS: Dzhelepov, B. S., Precbrazhenskiy, B. K., 48-22-2-3/17  
Rogachev, I. M., Tishkin, P. A.

TITLE: The Conversion Electron Spectrum of the Dysprosium Fraction  
(Spektr konversionnykh elektronov disproziyevoy fraktsii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya. 1959  
Vol. 22, Nr 2, pp. 126-134 (USSR)

ABSTRACT: Conversion spectra of the neutron-saturated dysprosium isotopes were investigated here. The dysprosium fraction was chemically and chromatographically separated from the tantalum target bombarded with fast protons in the synchrocyclotron OJRN. The irradiation lasted several hours, the separation of the rare earths took place 20-30 hours after the termination of the irradiation. The situation was more complicated than was to be assumed according to the Siberg tables. In the conversion spectrum the authors determined lines whose intensity decreased with half lifes of: a) 7,5  $\pm$  11 hours, b) 38 hours and c) 4,7 days. Due to the difficult situation explanations are here given according to groups of half-lives. The Dy-fraction was investigated in two  $\beta$ -spectrometers with magnetic lenses (magnetic-lens

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The Conversion Electron Spectrum of the Dysprosium Fraction 48-22-2-3/17

spectrometer). 1.) In the spectrum of the dysprosium-fraction 15 electron-lines whose intensity decreased with a half-life of  $7,5 \pm 11$  hours were determined in the range of  $3 \div 150$  keV. All lines repeated themselves in 6 series (performed with 2 sources). The value of the half-life of 7,5 hours was determined according to the decrease in intensity of the lines with 7,4 keV. The electron lines with 5,36 and 42 keV are L-MM, K-LL, K-L, and M Auger-electrons, the lines with 13,5, 57,5, 64,0, 74,0 and 81,0 keV were identified as conversion electrons K, L and M of the transitions with 65,5 and 82,5 keV in Tb. The electron lines with 48,0, 92,0, 98 and 142 keV apparently are K and L conversion electrons which correspond to the transitions with 100 and 150 keV, whereas the line with 132 keV apparently corresponds to the K-electrons of the transition with 184 keV. All transitions given here were for the first time observed by the authors. - 2.) Beside the lines with a time of decrease in intensity of about 10 hours 5 weak electron lines with a time of decrease in intensity of about 38 hours were determined in the  $\beta$ -spectrometer with single lens. For the time being it was not possible to ascribe these lines to a certain isotope. - 3.) After these

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The Conversion Electron Spectrum of the Dysprosium Fraction 48-22-2 3/17

lines (with 10 hours) weaker lines of the conversion electrons, the intensity of which decreased with a half life of  $(4,5 \pm 0,2)$  days became distinctly visible. K-, L- and M-electrons of the transitions with 63 and 87 keV L- and M-electrons of the transition with 57 keV, K- and L-electrons of the transitions with 149, 163, 180 and 200 keV, K-electrons of the transitions with 60 and 262 keV were determined. Some of these lines could not be identified. - It is shown that the activity decreasing with a period of 4,5 days can be ascribed to the terbium isotopes. It seems that at least 4 terbium isotopes with a half-life period of about 5 days exist:

$Tb^{153}$  ( $T = 5,1$  days),  $Tb^{155}$  ( $T = 5,6$  days),  $Tb^{157}$  ( $T = 4,7$  days) and  $Tb^{161}$  ( $T = 6,8$  days). Summarizing the authors state that it is possible that  $Tb^{157}$  has a half-life of about 5 days, that it is accumulated from  $Dy^{157}$  ( $T = 8,2$  hours) and that some conversion lines corresponding to the period of  $\sim 5$  days might belong to it. The decay scheme was discussed with L. K. Peker. K. Ya. Gromov helped with the organisation of the works. A. Bagdanov and

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The Conversion Electron Spectrum of the Dysprosium Fraction 48-22-2-3/17

A. I. Yashchuk, Student-Diplomants (which prepare for their diplomas) helped with the work.  
There are 5 figures, 3 tables, and 9 references, 3 of which are Soviet.

ASSOCIATION: Fizicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanova (Institute for Physics in the Leningrad State University imeni A. A. Zhdanov)

AVAILABLE: Library of Congress

1. Dysprosium isotopes-Conversion spectra
2. Dysprosium isotopes-Irradiation
3. Rare earth elements-Separation

Card 4/4

AUTHORS: Dzhelepov, B. S., Preobrazhenskiy, B. K., SOV/48-22-6-5/2c  
Rogachev, I. M., Tishkin, P. A.

TITLE: Conversion Electron Spectrum of the Cerium Fraction (Spektr konversionnykh elektronov tseriyevoy fraktsii)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 8, pp. 931 - 934 (USSR)

ABSTRACT: The activity of the cerium fraction in all sources obtained by the authors by irradiation at different times was small. At the beginning of the measurements the counting rate of the most intensive conversion line was 900 pulses per minute. The spectrum of the conversion electrons is shown in figures 1 and 2. Table 1 gives the energies of the lines, their possible identification and their relative intensities. The 15 electron lines that are found are classified into 3 groups according to their half-life. The intensities of the electron lines with energies of 126.2 and 159.1 keV decreased very slowly. These lines are apparently produced by the K- and (L + M) conversion electrons of the well known  $\gamma$ -transition  $h\nu=165$  keV of the  $Ce^{139}$  isotope ( $T_{1/2} = 140$  days). The

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Conversion Electron Spectrum of the Cerium Fraction

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intensity of the electron lines 212,8 and 248 keV decreased with a half-life of 33 hours. These lines can be identified as K- and (L + M) conversion lines of  $\gamma$  transition. The value of the ratio  $K/(L + M)$  indicates a multipole type E3 (Table 2). An isomeric state with an energy of 256 keV corresponding to a half-life of 34,5 hours (Ref 7) exists in the isotope  $Ce^{137}$ . The authors are of opinion that considering the comparability of the decay energy (half-life energy) and of the multipole order energy of the observed transition with the data of the isomeric transition in  $Ce^{137}$  the activity with a half-life of 33 hours could be ascribed to  $Ce^{137}$ . These data do not contradict the decay scheme suggested by Brosi and Kestelle. The intensity of the remaining lines decreased with a half-life of 17 hours. The evidence obtained by the authors is not sufficient to ascribe the lines with a  $T_{1/2}$  of 17 hours to one definite Ce-isotope or to one of its daughter products, or to set up decay schemes. The authors express their gratitude to the synchrocyclotron staff and to I.A.Yutlandov. There are 2 figures, 2 tables, and 8 references, 4 of which are Soviet.

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Conversion Electron Spectrum of the Cerium Fraction

SOV/48-22-8-5/20

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy Institut Leningradskogo  
gos. universiteta im. A.A.Zhdanova (Scientific Research In-  
stitute of Physics at the Leningrad State University imeni  
A.A.Zhdanov)

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TISHKIN, P. A.

21(0)

PHASE I BOOK EXPLORATION

807/2001

International Conference on the Peaceful Uses of Atomic Energy, 24., Geneva, 1958  
Radiation effects on the peaceful uses of atomic energy (Reports of Soviet Scientists)  
Nuclear Physics) Moscow, Atomizdat, 1959. 552 p. (Series: Nat Study, Vol. 1)  
8,000 copies printed.

Ms. (Title page): A.I. Alkhimov, Academician; V.I. Veksler, Academician; and  
I.L. Vlasov, Candidate of Physical and Mathematical Sciences; Ed. of this  
volume: S.L. Bredner and B.P. Zaslavsky, Candidates of Physical and Mathematical  
Sciences; Ed. (Outside book): O.L. Smolyanov, Ph.D.; N.I. Maslov.

NOTES: This collection of articles is intended for scientific research workers  
and other persons interested in nuclear physics. The volume contains 13 papers  
presented by Soviet scientists at the 1958 Conference on Peaceful Uses of  
Atomic Energy, held in Geneva in September 1958.

CONTENTS: It is divided into two parts. Part I contains 17 papers dealing with  
plasma physics and controlled thermonuclear reactions, and Part II contains 26  
papers on nuclear physics, including problems of particle acceleration and of  
atomic ray physics. The first paper by L.A. Artyukhin presents a review of  
Soviet work on controlled thermonuclear reactions. The remaining papers in

Part I deal with particular problems in this field.

Papers in Part II deal in detail with various problems in nuclear physics,  
such as the effects of heavy atoms and their isotopes, and with the study of  
atomic radiation by means of artificial earth satellites and rockets, described  
in a paper by S.K. Kozlov. The Russian-language edition of the proceedings of  
the conference is published in 16 volumes. The first 6 volumes contain all the  
papers presented by Soviet scientists as follows: Volume (1), Veksler's  
article (Nuclear Physics); Volume (2), Veksler's article (Nuclear Physics);  
Volume (3), Veksler's article (Nuclear Physics); Volume (4), Veksler's article  
(Nuclear Physics); Volume (5), Veksler's article (Nuclear Physics); Volume (6),  
Veksler's article (Nuclear Physics); Volume (7), Veksler's article (Nuclear Physics);  
Volume (8), Veksler's article (Nuclear Physics); Volume (9), Veksler's article  
(Nuclear Physics); Volume (10), Veksler's article (Nuclear Physics); Volume (11),  
Veksler's article (Nuclear Physics); Volume (12), Veksler's article (Nuclear Physics);  
Volume (13), Veksler's article (Nuclear Physics); Volume (14), Veksler's article  
(Nuclear Physics); Volume (15), Veksler's article (Nuclear Physics); Volume (16),  
Veksler's article (Nuclear Physics). The other 16 volumes contain selected papers  
presented at the Conference by non-Soviet scientists. In the present volume  
discussions between the English and Russian editions of the proceedings  
are presented in three articles where the texts are not identical.  
V.I. Veksler, et al., "Radioactive Isotopes and Their Applications", et al.,  
"High Frequency Plasma Oscillations", and "High Frequency Plasma Oscillations"  
book reviews. The serial numbers of reports 2502 and 2504 are reversed in the  
Russian edition. Report 2211, by Smolov, et al., is numbered 2556 in the  
English edition.

# TABLE OF CONTENTS

## Reports of Soviet Scientists; Nuclear (cont.)

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Veksler, S.K., and A.B. Chubakov. Cosmic Ray Studies in the USSR by Means  
of Rockets and Satellites (Report 2502)  
Nuclear Physics (cont.)  
S.K. Kozlov, V.I. Veksler, V.I. Veksler, V.I. Veksler, V.I. Veksler, and  
V.I. Veksler.

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DZHELEPOV, B.S.; TISHKIN, A.I.; SHELIMOV, I.I.

Decay of metastable  $\text{Pa}^{241}$  ( $T_{1/2} = 1.2$  days). 1974, 19

SSSR. Ser. Fiz. 28 no.10-1631-1636 0 161. (USSR 10-16)

L 3177-66 EWT(m) DIAAP

ACCESSION NR: AP5013992

UR/0048/65/029/005/0714/0720

AUTHOR: Dzhelepov, B.S.; Tishkin, P.A.; Shishelov, I.A.

TITLE: New data on the decay of the isomeric state of rhénium 184 /  
Report, 15th Annual Conference on Nuclear Spectroscopy and the Structure of the Atomic Nucleus held in Minsk, 25 Jan-2 Feb 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.29, no.5, 1965, 714-720

TOPIC TAGS: isomeric transition, rhénium, tungsten, internal conversion, nuclear spectroscopy

ABSTRACT: This paper reports a continuation of the authors' investigations of the decay of 167-day  $\text{Re}^{184}$  (Izv.AN SSSR.Ser.fiz.27,1232 (1963); 28,1631 (1964); Program of the 14th Annual Conference on Nuclear Spectroscopy, p.68, Izd."Nauka",1964). The investigation was conducted by the conversion electron coincidence method with the Leningrad State University double toroidal beta spectrometer. The mea-

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ACCESSION NR: AP5013992

surements were started 20 month after activation of the sample; there was therefore no appreciable 68-day  $\text{Re}^{183}$  contamination. The conversion electrons were observed in the energy range from 25 to 170 keV. The conversion electron spectrum and several coincidence spectra are presented graphically and are discussed in some detail. The tentative decay scheme to which the authors were led is shown in the enclosure. The 64 keV transition in  $\text{W}^{184}$  has not been previously reported. This transition is difficult to observe in the conversion electron singles spectrum because of the proximity of the L64 line to the  $(M + N)55$   $\text{W}^{184}$  lines and of the  $(M + N)64$  lines to the strong L84  $\text{Re}^{184}$  line; it was observed by coincidences of L64 and  $(M + N)64$  with L111  $\text{W}^{184}$  conversion electrons. The 1223 and 1287 keV  $\text{W}^{184}$  levels between which this transition is presumed to occur were identified and the spins and parities assigned by B.Harmatz and T.H.Handley (Nucl. Phys.56,1,1964). Prompt and delayed coincidences between the L111  $\text{W}^{184}$  conversion electrons and conversion electrons from the 55, 162 and 217 keV  $\text{W}^{184}$  transitions were sought and not found. From this it is concluded that  $\text{W}^{184}$  has a previously unreported isomeric state

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with a half life greater than  $5 \times 10^{-6}$  sec. If the enclosed decay scheme is correct, the long-lived state is the 1287 keV  $5^-$  state. "The authors express their gratitude to L.K.Peker for his interest in the work and for a discussion of the results." <sup>Nov</sup><sub>55</sub> Orig.art.has: 6 figures.

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta (Scientific Research Physics Institute, Leningrad State University) <sup>Nov</sup><sub>55</sub>

SUBMITTED:00

ENCL: 01

SUB CODE: NP

NR REF SOV: 006

OTHER: 002

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L 26658-66 EWT(m) DIAAP

ACC NR: AP6017115

SOURCE CODE: UR/0048/65/029/012/2157/2162

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TITLE: Duplexed toroidal beta-spectrometer<sup>10</sup> for studying ee- and beta e-coincidences  
 This paper was presented at the 15th Annual Conference on Nuclear Spectroscopy and the Structure of the Atomic Nucleus, held in Minsk from 25 January to 2 February 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 12, 1965, 2157-2162

TOPIC TAGS: spectrometer, radioactive decay, vacuum chamber

ABSTRACT: The Leningrad University and the Radium Institute have built duplexed toroidal beta-spectrometers for the purpose of studying the decay schemes of radioactive nuclei by the coincidence technique. The focussing system used is based on the principle developed by Nielsen and Kofoed-Hansen. This design affords several advantages for such studies, and experiments already carried out show that the instrument can be used to study complex decay schemes.

The vacuum chamber ( $2 \times 10^{-4}$  mm Hg) has three brass cylinders. The two outer ones are mounted on cradles that move on rails so that they can be pulled away from the stationary center one. Electromagnets, diaphragms, and holders

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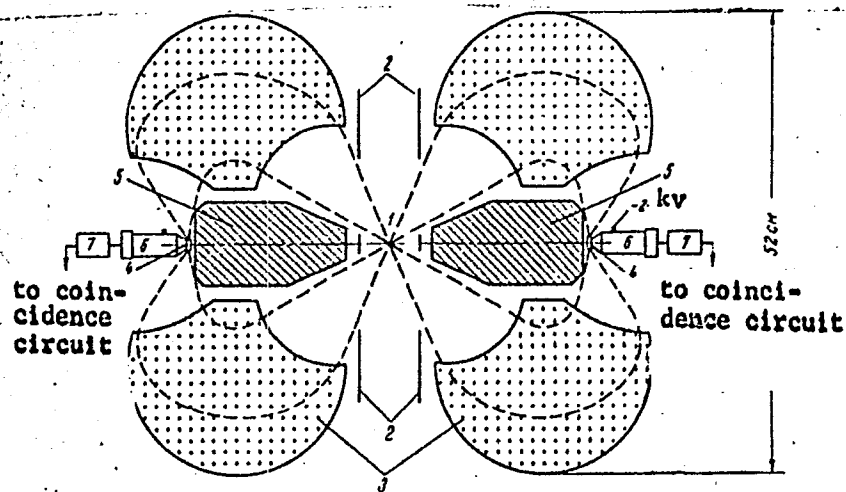


Diagram of the spectrometer in the plane of the pole plates: 1) source, 2) diaphragms, 3) pole plates, 4) receiver slots, 5) lead absorbers, 6) photo-multipliers, 7) pulse amplitude limiters (outputs go to the coincidence circuit).

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for the detectors are mounted on the central part. Each of the two electro-  
magnets has six sections with identical 20 deg. gaps. Each coil is water-  
cooled, has 900 turns of 1.2-mm dia. copper wire wound on a copper shell, and  
can carry up to 4 amp with negligible heating. Other details of the instru-  
ment, including the source, diaphragms, and detectors, are described. A  
section through the spectrometer in the plane of the pole plates is shown  
(see enclosure), as well as a photograph of the magnet section.

Experiments conducted with the instrument to calibrate it and test its  
capabilities and limitations are discussed extensively. Curves plotted from  
measurements of conversion lines are shown. The authors thank V. I. Leykum and  
G. Ya. Sozinov (Engineers of VNIIM) for building the instrument; V. Mikhaylov and  
V. Golubev (technicians of the "Etalon" Plant) for setting up the instruments; S. V.  
Semenov, A. A. Afonin, V. A. Koshelev and F.I. Chepikov for their help in calibrating  
the spectrometers. Orig. art. has: 7 figures and 1 table. [JPRS/

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 004

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BLG

L 26652-66 EWT(1)/EWT(m) DIAAP/IJP(c) JD/JG/AT

ACC NR: NP6017121

SOURCE CODE: UR/0048/65/029/012/2264/2270

AUTHOR: Dzhelapov, B. S.; Moskvina, L. N.; Tishkin, P. A.; Uchevatkin, I. F.;  
Shishelov, I. A. 60 B

ORG: Scientific Research Physics Institute, Leningrad State University im. A. A. Zhdanov (Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta); All-Union Scientific Research Institute of Metrology im. D. I. Mendeleev (Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii)

TITLE: Coincidence of conversion electrons in Ce<sup>135</sup> decay [This paper was presented at the 15th Annual Conference on Nuclear Spectroscopy and the Structure of the Atomic Nucleus, held in Minsk from 25 January to 2 February 1965.]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 12, 1965, 2264-2270

TOPIC TAGS: cerium, lanthanum, spectrometer, tantalum, proton, conversion electron spectrum

ABSTRACT: The reported work was carried out to verify the scheme of excited levels of La<sup>135</sup>. The spectrum of the conversion electrons was obtained with the duplexed toroidal beta spectrometer of the Leningrad State University. The La<sup>135</sup> sample was obtained from a tantalum target irradiated by 660 Mev protons for 5 to 10 hours. Results appear to be definitive for the locations of transitions with energies of 88.4 and 118.0 keV in the upper part of the decay scheme. The authors thank K. Ya. Gromov and Zh. T. Zhelev for supplying the preparations and N. A. Lebedev for the chromatographic separation of the fractions. Orig. art. has: 4 figures. JPRS Card 1/1 SUB CODE: 20 / SUBM DATE: none / ORIG REF: 010 / OTH REF: 001

L 31405-66 EWT(m)

ACC NR: AP6022575

SOURCE CODE: UR/0048/66/0030/003/0527/0529

AUTHOR: Dzhelepov, B. S.; Tishkin, P. A.; Shishelov, I. A.

ORG: Scientific Research Physics Institute, Leningrad State University (Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo universiteta)

TITLE: Excitation of a state with energies of 336 kev in the decay of Yb sup 169 yields Tu sup 169

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 3, 1966, 527-529

TOPIC TAGS: excited state, radioactive decay, chromatography, particle accelerator target, proton accelerator, synchrocyclotron, radiation spectrometer, conversion electron spectrum, beta spectroscopy

ABSTRACT: The decay of  $\text{Yb}^{169} \rightarrow \text{Tu}^{169}$  is studied for the purpose of discovering the ~336 kev energy state by the "electron-electron" coincidence method. The  $\text{Yb}^{169}$  sample was extracted by chromatography from the lithium fraction of a tantalum target irradiated by 660 mev protons for 5 hours in the Dubna synchrocyclotron. Measurements were made on a double toroidal beta spectrometer. A graph is shown of a portion of the coincidence spectrum of the K131  $\text{Tu}^{169}$  conversion electrons. The intense coincidence peaks observed are identified as K. L. and M conversion lines of the 177 kev transition and (M+N) 131 and K198 spectrum of the conversion electrons. The relative intensities of the 177 kev K and L

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БИНДАНОВ, Б.А.; БИНОУСТОВ, В.П.; ТИМЕЦА, С.А.; ШИЛОВ, Л.А.

Double toroidal  $\beta$ -spectrometer for studying  $e^+e^-$  and  $\beta e^-$  coincidences. Izv. AN SSSR. Ser. fiz. 29 no.12:2157-2162 D 1965.

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1. Nauchno-issledovatel'skiy fizicheskii institut Leningradskogo gosudarstvennogo universiteta i Radiyevyy institut AN SSSR.

DZHELEPOV, B.S.; MOSKVIN, L.N.; TISHKIN, P.A.; UCHEVATKIN, I.P.; SHISHKIN, I.A.

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gosudarstvennogo universiteta im. A.A. Zhdanova i Vsesoyuznyy  
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DZHELEPOV, B.S.; TISHKIN, P.A.; SHISHENOV, I.A.

New data on  $\text{Re}^{184}$  decay. Izv. AN SSSR. Ser. fiz. 29 no. 5:714-720  
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1. Nauchno-issledovatel'skiy fizicheskii institut Leningradskogo  
gosudarstvennogo universiteta.



DZHELEPOV, B. S.; TISHKIN, P. A.; SHISHELOV, I. A.

"The Decay of the Metastable State of  $\text{Re}^{184}$  ( $t_{1/2}$  165d)."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22  
Feb 64.

LGU (Leningrad State Univ)

DZHELEPOV, B.S.; TISHKIN, P.A.; SHISHELOV, I.A.

Studying the decay scheme of  $\text{Re}^{184}$  by the method of  
e<sup>-</sup>e<sup>-</sup>-coincidences. Izv. AN SSSR. Ser. fiz. 27 no.10:1281-  
1284 0 '63. (MIRA 16:10)

SNEGUR, N. (pos. Novogornyy, Chelyabinskaya obl.); MAYTAMA, I. (Komsomol'sk-na-Amure); ZADOROZHNIY, N. (Kurgan); LUK'YANOV, N.; TISHKIN, V. (Orlovskaya obl.); STEPIN, A.; KHANDOGIN, A.; LAPAYEV, Ye. (Volzhsk); OKULOVSKIY, A.; MANEROV, V.

Readers' letters. Pozh.delo 9 no.3:30 Mr '63.  
(Fire prevention)

(MIRA 16:4)

TISHKIN, Ye.I., inzh.

Organization of local operations in the accelerated movements of  
"built-up" trains. Zhel.dor.transp. 45 no.9:46-48 S '63.  
(MIRA 16:9)

(Railroads—Management)  
(Railroads—Making up trains)

REYTBAT, A.Ya. (Dnepropetrovsk); TISHKIN, Ye.M., inzh. (Dnepropetrovsk)

Method for the accelerated delivery of local shipments. Zhel.-dor.transp.  
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1. Glavnyy inzh. sluzhby dvizheniya Pridneprovskoy dorogi.

PERMINOV, A.S.; TISHKIN, Ye.M., starshiy nauchnyy sotrudnik

Efficient utilization of the rolling stock in local operations.  
Zhel.dor.transp. 47 no.9:20-26 S '65.

(MIRA 1965)

1. Zamestitel' glavnogo inzhenera Glavnogo upravleniya dvizheniya Ministerstva putey soobshcheniya (for Perminov).
2. Otdeleniye ekspluatatsii Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Tishkin).

KARETNIKOV, A.D., doktor tekhn.nauk; ASHUKIN, D.D., kand.tekhn.nauk;  
VOROB'YEV, N.A., kand.tekhn.nauk; TISHKIN, Ye.M., inzh.

How to organize the local operations on lengthened haul  
distances. Zhel.dor.transp. 44 no.8:55-59 Ag '62.

(Railroads--Management)

(MIRA 15:8)

TISHKOV, Yu. Ya.; KREST'YANINOV, V.F.; GUBA, P.L.; PRIBYTKOV, A.Ye.;  
YEVTYUTOV, P.A.

Using new technological processes. NTO 5 no.1:29 Ja '63.  
(Zlatoust—Iron and steel plants) (MIRA 16:5)



*Tishkina, A.S.*

ZHELEZNYAKOVA, S.R., inzh.; TISHKINA, A.S., inzh.

Heat-resistant materials and their properties for use in electric furnaces. Vest.elektroprom. 28 no.12:49-54 D '57. (MIRA 10:12)

1. Opytno-konstruktorskoye byuro tresta "Elektropech'."  
(Electric furnaces)

*TISHKINA A.S.*

AUTHOR: Zheleznyakova, Sh.R., and Tishkina, A.S., Engineers. 110-12-14/19

TITLE: Heat-resisting Materials Used in Electric Furnaces and their Properties (Zharoprochnyye materialy, primenyayemye v elektrotechakh i ikh svoystva)

PERIODICAL: Vestnik Elektromyshlennosti, 1957, Vol.28, No.12, pp. 49 - 54 (USSR).

ABSTRACT: The scientific research department of the design office of the Elektrotech' Trust has studied the heat-resistance of steels and alloys for electric furnaces. The tests were made on formed and on cast materials. The heat-resistances were tested on machines types БТ-8 БММ using standard procedure. The test duration was 500 hours. The creep-testing machines were specially developed by the department with the active participation of: Candidate of Technical Sciences Ya.R. Radzin, Engineer K.P. Sukhanov and Engineer E.N. Marmer. Four specimens were creep-tested simultaneously for periods of 1 000 - 2 000 hours, at the same temperature but under different stresses. A series of primary creep curves were then constructed. Within the region of steady creep, the data of the primary curves was used to determine total strains of 0.5, 1, 2 and 3%, which were plotted on log/log Card1/5 paper with time on the abscissus and the stress on the ordinate,

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forming a straight line which could be extrapolated to the full life of the part.

The different steels tested are described below; all except the first were heat-treated: steel 1X18H9T (OR 1T) is widely used for furnace parts operating at temperatures of up to 800 °C; it is of the austenitic-ferritic class with the properties and test results shown in Table 1. Creep tests were made at temperatures from 600 - 750 °C. By extrapolating the curves of Fig.1 to 10 000 hours, the creep limits given in Table 2 emerged.

Steel X23H18 (3M-417) is of the austenitic class and is heat-resistant up to 1 000 °C; its physical, mechanical and heat-resisting properties are given in Table 3. Specimens that had been heat-treated at a temperature of 1 150 °C were tested for creep at temperatures between 700 - 1 000 °C. The uniform rate of creep was approximately up to 3%. Stress/time curves are given in Fig.2 and creep limits for 10 000 hours stress in Table 4.

Steel X18H25C2 (2R-3C) is of the austenitic class. At temperatures above 1 000 °C the carbide phase begins to dissolve, and it is almost completely dissolved at 1 200 °C, at which temperature

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there is a great increase in grain size. The properties of the steel at different temperatures are given in Table 5. The specimens tested were heat-treated at a temperature of 1 200 °C. Creep tests were made at temperatures of 875 and 1 100 °C. Uniform rate of creep was only observed up to 2% strain. Stress/time curves are given in Fig.3 and the creep limits and long-term strength in Table 6.

Alloy X20H80T3A (3M-437A) was considered as being a more heat-resisting material for creep-testing. This alloy when hardened at high temperature is an unsaturated solid solution which on repeated heating breaks down with the formation of a second phase which strengthens the alloy. The material was heat-treated at a temperature of about 1 100 °C. Creep tests were carried out at temperatures from 875 - 1 100 °C. A uniform rate of creep occurs up to about 3% strain. The stress/time test results are given in Fig.4 and creep limits and long-term strength in Table 7.

Alloy X20H80T (3M-435) is plastic in the hardened condition and makes good stampings. Its structure is austenitic with carbide. The specimens were heat-treated at 1 100 °C. Creep tests were made at temperatures from 875 - 1 100 °C. The test results and

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creep limits are given in Fig. 5 and Table 8. Cast steel X25H11 (9A-316) is widely used for furnace parts operating at temperatures around 1 100 °C. Its structure is austenitic with carbides. It is convenient to cast, weld and work mechanically. Published data on its mechanical properties are not available. Creep tests were made at temperatures of 700 - 1 000 °C on specimens cut from cast rails. The specimens broke at strains of 3 - 4%; hence, creep limits up to 1% only were used. The stress/time relationships are given in Fig. 6, and the creep limit and long-term strength in Table 9. The following conclusions are drawn from the work: alloy X20H80T3A hardened from 1 100 °C has good resistance up to 900 °C and is heat-stable to 1 100 °C. It is recommended for highly-stressed parts where other steels have a short life. Because of its cost it should not be used at temperatures above 900 °C, where cheaper steels are equally suitable. Alloy X20H80T, even after heat-treatment, has equal or worse heat-resisting properties at all temperatures than other steels tested and its use is not recommended. Steel X25H18 is heat-stable up to 1 000 °C and is of satisfactory resistance at this temperature, up to which it

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may be used. Steel X18H2502 is heat-stable up to 1 100 °C; at temperatures above 900 °C its heat-resistant properties resemble those of alloy X20H80T3A and it is, therefore, appropriate for temperatures up to 1 100 °C. Cast steel 3M316 has good heat-resistant properties, is heat-stable up to 1 100 °C, and can be used for cast parts up to this temperature. Steel 1X18H9T is heat-stable up to 800 °C and may be used for parts operating up to this temperature.

There are 6 figures, 9 tables and 4 references, 2 of which are Slavic.

ASSOCIATION: Design Office of the Elektropech' Trust (OKB Tresta "Elektropech'")

SUBMITTED: February 14, 1957.

AVAILABLE: Library of Congress  
Card 5/5

TISHIMA, V.I.

Properties of antistatic products (from "Reyon Zellwolle und  
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(Electrostatics)

(MIRA 13:6)

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Iron bacteria in some water basins in Bulgaria. Godishnik  
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KIBA, B.S., mekhanik; TISHKO, N.I., slesar'

Electric saw for cutting high-tensile wire. Suggested by B.S. Kiba, N.I. Tishko. Rats.i izobr.prodl.v stroi. no.16:48-49 '60.  
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(Wire)

CHAYKOVSKIY, E.G.; TISHKOV, A.Ya.

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(MIRA 16:9)

KOSTYLEV, A.D., kand. tekhn. nauk; GURKOV, K.S., kand. tekhn. nauk; PARINSKIY, Yu.F., inzh.; TISHKOV, A.Ya., inzh.; MAKSIMOV, V.A.; SEDYKHIN, V.F.; KOLESNIKOV, A.T.

Continuous operation working element of a vibration loader.  
Ugol' 39 no.1240-43 D '64. (MIRA 1342)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR (for Kostylev, Gurkov, Parinskiy, Tishkov). 2. Aleksandrovskiy mashinostroitel'nyy zavod (for Maksimov, Sedyukov, Kolesnikov).

TISHKOV, FELDSHER B.N.

SHANDALOV, D.A., fel'dsher (Talass); DROZD, V.I., fel'dsher (Minskaya oblast'); PEKUR, M.I., fel'dsher (Krasnodarskiy kray); SHTANCHAYEV, S.TS., pomoshchnik epidemiologa (Kokchetav)

Notes on the article by Feldsher B.N. Tishkov on "Intravenous injections with detached needle." Fel'd. i akush. no. 12-36-39 D '54. (MLRA 8:2)  
(INJECTIONS

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